Claims

1.   Method for creating a saliency map of an image characterized in that it comprises the steps of :

- Projection (E1) of said image according to the luminance (A) component and if said image is a color image, according to the luminance (A) component and according to the chrominance components (Cr1, Cr2),

- Perceptual sub-bands decomposition (E3, T2, T'2, T"2) of said components (A, Cr1, Cr2) according to the visibility threshold of a human eye,

- Extraction (E7) of the salient elements of the sub-bands related to the luminance (A) component,

- Contour enhancement (E8, T7) of said salient elements in each sub-band related to the luminance (A) component,

- Calculation (T7) of a saliency map from the contour enhancement, for each sub-band related to the luminance (A) component.

- Creation (T8) of the saliency map as a function of the saliency maps obtained for each sub-band.

2.   Method according to claim 1 characterized in that it comprises, further to the perceptual sub-bands decomposition,

- a step of achromatic contrast sensitivity function (CSF) for the luminance (A) component and if said image is a color image,

- a step of chromatic sensitivity function for the chromatic components (Cr1, Cr2).

3.   Method according to claim 2 characterized in that it comprises a step (E6, T4, T'4, T"4) of visual masking, further to the step of contrast sensitivity function, for each sub-band of the luminance (A) component and of the chromatic (Cr1, Cr2) components.

4.   Method according to claim 3 characterized in that, when said image is a color image, it comprises a step (T5) of chromatic reinforcement of the luminance (A) sub-bands.

5.   5.   Method according to any of the preceding claims characterized in that the perceptual sub-bands decomposition is obtained by carving-up the frequency domain both in spatial radial frequency and orientation.

6.   Method according to claim 5 characterized in that the perceptual

10   decomposition of the luminance (A) component leads to 17 psycho visual sub-bands distributed on four crowns.

7.   Method according to claim 5 or 6 characterized in that the perceptual decomposition of the chromatic components (Cr1, Cr2) leads to 5 psycho

15   visual sub-bands distributed on two crowns for each chromatic component (Cr1, Cr2).

8.   Method according to claims 4 to 7 characterized in that the chromatic reinforcement of the luminance (A) component is done on the sub-bands of

20   the second crown and based on the sub-bands of the first crown of the chromatic components (Cr1, Cr2).

9.   Device for creating a saliency map of an image characterized in that it comprises means for:

25   -   Projecting said image according to the luminance (A) component and if said image is a color image, according to the luminance (A) component and according to the chrominance components (Cr1, Cr2),
                -   Transposing into the frequential domains said luminance and

30   chrominance signals,
                -   Decomposing into perceptual sub-bands said components of the frequential domain according to the visibility threshold of a human eye,

- Extracting the salient elements of the sub-bands related to the luminance component,

- Contour enhancing said salient elements in each sub-band related to the luminance component,

- Calculating a saliency map from the contour enhancement, for each sub-band related to the luminance component.

- Creating the saliency map as a function of the saliency maps obtained for each sub-band.